

INTEGRATED CIRCUIT DEVICES INCLUDING AN ISOLATION REGION  
DEFINING AN ACTIVE REGION AREA AND METHODS FOR  
MANUFACTURING THE SAME

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ABSTRACT OF THE DISCLOSURE

Integrated circuit devices including an isolation region are provided. The devices include an integrated circuit substrate and a trench in the integrated circuit substrate that defines an active region of the integrated circuit device. A silicon layer is provided on the integrated circuit substrate that extends over an edge of the trench and along an upper portion of a first sidewall of the trench. An insulating material is positioned adjacent the silicon layer that extends across some, or all, of the trench to define the isolation region. Methods of forming such integrated circuit devices are also provided.

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